

REMARKS

Specification

The title has been amended to better reflect the invention as claimed.

Claims

Claims 1, 17 and 19 have been amended and claim 20 has been cancelled without prejudice or disclaimer of the encompassed subject matter.

Claim 1 has been amended to incorporate the features of claim 20, now cancelled.

Claim 17 has been amended to replace “modified particulate solid” with “encapsulated particulate solid and “compound” with “cross-linking agent” to maintain antecedent basis with claim 1 from which claim 17 depends. Representative support for these changes may be found in claim 2 as originally filed and at page 2, line 11 of the specification as originally filed.

Claim 19 has been amended to replace the phrase “the resultant” with the phrase “a resultant” to maintain antecedent basis with claim 1 from which claim 19 depends.

In view of the above discussed representative support for each of the claim amendments, Applicants submit that no prohibited new matter has been added by any of the amendments.

1. Objection to the Title

The title is objected to as not descriptive.

Applicants have amended the title of the application to “Dispersant-Encapsulated Particulate Solids”. In view of this amendment, Applicants respectfully request that the objection be withdrawn.

2. Objection to the Claims

Claim 19 is objected to for the reason asserted on page 2 of the Office Action.

Claim 19 has been amended to replace the phrase “the resultant” with the phrase “a resultant” as suggested by the Examiner. Accordingly, Applicants respectfully request that the objection be withdrawn.

3. Rejection Under 35 U.S.C. 112, second paragraph

Claim 17 is rejected as lacking antecedent basis for recitation of each of the terms “modified particulate solids” and “compound”.

Claim 17 has been amended to replace “modified particulate solid” with “encapsulated particulate solid and “compound” with “cross-linking agent”. In view of these amendments, Applicants respectfully request that the rejection be withdrawn.

4. Rejection under 35 U.S.C. 103(a)

A. Ando

Claims 1, 3-5, 8-11, 16, 18, 21, 22 and 25-28 are rejected under 35 U.S.C. 103(a) as obvious over US 2004/0176498 to Ando *et al.* (“Ando”) for the reasons provided on pages 3-5 of the Office Action.

Without acquiescing to the merits of this rejection, Applicants have amended claim 1 to incorporate the features of claim 20, which was not included in this rejection and which also has been indicated as allowable. Accordingly, Applicants submit that this rejection is therefore moot. Applicants would still like, however, to make the following four (4) observations regarding how Ando may be distinguished from the claimed invention.

1. Experimental comparison has already been made

The closest example in Ando is considered to be Example 1 (at page 25 of Ando), which discloses an isocyanate hydroxyl cross-linked acrylic polymer. The cross-linking in Example 1 uses among the mildest conditions disclosed in the examples of Ando (*i.e.*, 60°C for 120 minutes).

Applicants have already experimentally demonstrated that the cross-linking scheme employed in the claimed invention is superior to isocyanate cross-linking. For example, comparative Example 1 (at page 21-22 of Applicants’ specification as originally filed) uses an isocyanate-hydroxyl cross-linking scheme. Table 1 (at page 22 of Applicants’ specification as originally filed) lists the measurements of particle size growth during the cross-linking reaction and demonstrates how Applicants’ claimed invention does not tend to destabilise a particulate solid dispersion (3-18% growth) while the comparative isocyanate cross-linking scheme substantially destabilises the particulate solid dispersion (27% growth). Thus, Applicants have already presented experimental evidence in support of the unobviousness of the claims over Ando.

2) *No particulate solid*

Applicants point out that in all of the examples and in the general teaching of Ando, there is no description of a particulate solid. Because Ando teaches the dispersion of a water-insoluble organic solvent into water (see *e.g.*, page 2, paragraph [0020] of Ando), the result is a liquid-liquid dispersion, *i.e.*, liquid droplets. Thus, Applicants submit that there is no particulate solid (as opposed to a particulate liquid).

3) *Dyes are the core teaching of Ando*

Applicants point out that all of the examples and the majority of the disclosure of the remaining specification are directed to dyes and not pigments.

4) *Nothing in Ando describes an advantage in keto cross-linking*

Applicants point out that Ando merely lists keto-hydrazide cross-linking but does not recognize any advantage to be had by doing so. Thus, keto-hydrazide cross-linking is nothing more than one of many possibilities.

B. Ando in view of Ma

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as obvious over Ando in view of U.S. Patent 5,085,698 to Ma *et al.* (“Ma”) for the reasons provided on page 5 of the Office Action.

Applicants point out that claims 23 and 24 are each indirectly dependent on claim 1. Claim 1 has been amended to incorporate the features of claim 20, which has been indicated as allowable. Accordingly, Applicants submit that this rejection is therefore moot.

Applicants would still like, however, to point out that claims 23 and 24 are distinguishable over Ando at least for the four (4) reasons detailed in section A above. Ma, which describes aqueous pigmented inks for inkjet printers, is unable to remedy the noted deficiencies present in Ando.

C. Ando in view of Freeman

Claim 29 is rejected under 35 U.S.C. 103(a) as obvious over Ando in view of U.S. 20020065347 to Freeman *et al.* (“Freeman”) for the reasons provided on page 6 of the Office Action.

Applicants point out that claim 29 is indirectly dependent on claim 1. Claim 1 has been amended to incorporate the features of claim 20, which has been indicated as allowable. Accordingly, Applicants submit that this rejection is therefore moot.

Applicants would still like, however, to point out that claim 29 is distinguishable over Ando at least for the four (4) reasons detailed in section A above. Freeman, which describes polymeric binders for water-resistant inkjet inks, is unable to remedy the noted deficiencies present in Ando.

5. Allowable Claims

Claims 6, 7, 12-15, 19 and 20 are indicated by the Examiner as allowable if rewritten in independent format, including all limitations of the base claim and all intervening claims.

Applicants have amended claim 1 to incorporate the features of claim 20. Accordingly, Applicants submit that claim 1 as amended is in condition for allowance.

6. Conclusion

The foregoing remarks are submitted to place the application in condition for allowance. Applicant therefore respectfully requests reconsideration and timely allowance of the pending claims. Should an interview be helpful to further prosecution of this application, the Examiner is invited to telephone the undersigned.

The Director is hereby authorized by this paper to charge any additional fees which are required by this filing to Deposit Account 50-0310.

Respectfully Submitted,
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